

WHAT IS CLAIMED IS:

1. A recording method for superposing a transfer sheet having a separable image forming layer on a recording surface of a support member to record a pattern including a stripe shape and separating the transfer sheet from the recording surface of the support member after the recording operation, thereby transferring and forming the image forming layer on the recording surface of the support member like the pattern, wherein the transfer sheet separated from the support member is held and the support member obtained after the recording operation is delivered out, while when the separated transfer sheet is returned and superposed on the recording surface of the support member which is then delivered in, and the recording operation is carried out over the support member by using an unrecorded section present between recorded stripes of the transfer sheet.
2. The recording method according to claim 1, wherein the held transfer sheet is returned to almost the same position as that set before the separation over the recording surface of the support member, and the recording operation is carried out by shifting a recording position at an arrangement pitch of a stripe shape corresponding to 1 to 1.5 pitches in at least one of a longitudinal direction of the stripe shape and a direction orthogonal to the longitudinal direction.
3. The recording method according to claim 1, wherein the held transfer sheet is returned onto the recording surface of the support member with a shift at an arrangement pitch of a stripe shape corresponding to 1 to 1.5 pitches in at least one of a longitudinal direction of the stripe shape and a direction orthogonal to the longitudinal direction, and the recording operation is carried out in almost the same position as that set before the separation.

4. The recording method according to claim 1, wherein
the transfer sheet is separated from the support member by
using the separating roller and is thus held, and is shifted
5 at an arrangement pitch of the stripe shape corresponding to
1 to 1.5 pitches in at least one of a circumferential direction
of the separating roller and an axial direction of the separating
roller and is thus returned onto the recording surface of the
support member which is then delivered in.

10

5. The recording method according to any of claims 1
to 4, wherein when the unrecorded section of the transfer sheet
obtained after the recording operation is narrower than a region
of the stripe shape to be recorded, the transfer sheet is
15 discharged.

N

6. A recording apparatus for superposing a transfer
sheet having a separable image forming layer on a recording
surface of a support member to record a pattern including a
20 stripe shape and separating the transfer sheet from the recording
surface of the support member after the recording operation,
thereby transferring and forming the image forming layer on
the recording surface of the support member like the pattern,
the apparatus comprising:

25 support member holding means for movably supporting the
recording surface of the support member;

transfer sheet supply means for supplying the transfer
sheet onto the support member provided on the support member
holding means;

30 a recording head for recording a desirable pattern onto
the transfer sheet in cooperation with the support member holding
means; and

separating and holding means for separating the transfer
sheet supplied to the support member holding means and recorded
35 by the recording head from the support member and holding the
transfer sheet, while supplying the held transfer sheet onto

the recording surface of the support member which is then delivered in,

wherein an unrecorded section present between recorded stripes of the transfer sheet is used to repetitively carry
5 out the recording operation over the support member.

7. The recording apparatus according to claim 6, wherein the separating and holding means holds the transfer sheet by vacuum suction.

10

8. The recording apparatus according to claim 6 or 7, wherein the separating and holding means is provided corresponding to at least the number of colors of the transfer sheet to be used and holds the transfer sheet for each of the
15 colors.

20

9. The recording apparatus according to any of claims 6 to 8, wherein the separating and holding means is a separating roller for holding the transfer sheet on a peripheral surface of a cylinder.

25

10. The recording apparatus according to claim 9, further comprising a rotating direction position detecting section for detecting a position in a rotating direction of the separating roller.

30

11. The recording apparatus according to claim 9 or 10, wherein a driving source for controlling a rotating angle of the separating roller is connected to the separating roller.

35

12. The recording apparatus according to any of claims 9 to 11, further comprising an axial direction moving position detecting section for detecting a position in an axial direction of the separating roller.

13. The recording apparatus according to any of claims

9 to 12, further comprising an axial direction movement driving section for controlling a movement of the separating roller in the axial direction of the separating roller.

5 14. The recording apparatus according to claim 13, wherein the axial direction movement driving section has stop positions in a plurality of places which are provided apart from each other at a predetermined interval in at least the axial direction.

10 15. A recording method for superposing a transfer sheet having a separable image forming layer on a recording surface of a support member to record a pattern including a stripe shape and separating the transfer sheet from the recording surface of the support member after the recording operation, 15 thereby transferring and forming the image forming layer on the recording surface of the support member like the pattern, wherein the transfer sheet separated from the support member is held and the support member obtained after the recording operation is delivered out, while when a recording position 20 of the held transfer sheet is to be detected and the transfer sheet obtained after the separation is to be returned onto the recording surface of the support member which is then delivered in, a returning position of the transfer sheet is changed and superposed based on a result of the detection of 25 the recording position or is superposed on almost the same position as that set before the separation to change image data to be recorded based on the result of the detection of the recording position, and the recording operation is thereafter carried out over the support member by using an unrecorded 30 section present between recorded stripes of the transfer sheet.

16. The recording method according to claim 15, wherein a recording start position and an inclination angle of the transfer sheet are corrected to return the transfer sheet obtained after the separation onto the support member based 35 on the result of the detection of the recording position, and

the recording position is shifted at an arrangement pitch of the stripe shape corresponding to 1 to 1.5 pitches in at least one of a longitudinal direction of the stripe shape and a direction orthogonal to the longitudinal direction.

5

17. The recording method according to claim 15, wherein the held transfer sheet is shifted at an arrangement pitch of the stripe shape corresponding to 1 to 1.5 pitches in at least one of a longitudinal direction of the stripe shape and
10 a direction orthogonal to the longitudinal direction, and a recording start position and an inclination angle of the transfer sheet are corrected to return the transfer sheet onto the recording surface of the support member based on the result of the detection of the recording position and the recording
15 operation is carried out in almost the same position as that set before the separation of the transfer sheet.

18. The recording method according to claim 15, wherein the held transfer sheet is returned to almost the same position
20 as that set before the separation over the recording surface of the support member, and the recording position is shifted at an arrangement pitch of the stripe shape corresponding to 1 to 1.5 pitches in at least one of a longitudinal direction of the stripe shape and a direction orthogonal to the longitudinal
25 direction, and a recording start position and an inclination angle of the image data to be recorded on the transfer sheet are corrected to carry out the recording operation based on the result of the detection of the recording position.

30 19. The recording method according to claim 15, wherein the held transfer sheet is shifted at an arrangement pitch of the stripe shape corresponding to 1 to 1.5 pitches in at least one of a longitudinal direction of the stripe shape and a direction orthogonal to the longitudinal direction and is
35 thus returned onto the recording surface of the support member, and a recording start position and an inclination angle of

the image data to be recorded on the transfer sheet are corrected to carry out the recording operation based on the result of the detection of the recording position.

5 20. The recording method according to any of claims 15 to 19, wherein when the unrecorded section of the transfer sheet obtained after the recording operation is narrower than a region of the stripe shape to be recorded, the transfer sheet is discharged.

10

21. A recording apparatus for superposing a transfer sheet having a separable image forming layer on a recording surface of a support member to record a pattern including a stripe shape and separating the transfer sheet from the recording 15 surface of the support member after the recording operation, thereby transferring and forming the image forming layer on the recording surface of the support member like the pattern, the apparatus comprising:

support member holding means for movably supporting the 20 recording surface of the support member;

transfer sheet supply means for supplying the transfer sheet onto the support member provided on the support member support means;

a recording head for recording a desirable pattern onto 25 the transfer sheet in cooperation with the support member holding means;

separating and holding means for separating the transfer sheet supplied to the support member holding means and recorded by the recording head from the support member and holding the 30 transfer sheet, while supplying the held transfer sheet onto the recording surface of the support member which is then delivered in; and

a holding state detecting section for detecting a recording start position and a recording inclination angle of the transfer 35 sheet held by the separating and holding means,

wherein a position is corrected depending on a result

of the detection obtained by the holding state detecting section and an unrecorded section present between recorded stripes of the transfer sheet is used to repetitively carry out the recording operation over the support member.

5

22. The recording apparatus according to claim 21, wherein the holding state detecting section includes an image pick-up camera for picking up an image of the transfer sheet held by the separating and holding means.

10

23. The recording apparatus according to claim 21 or 22, wherein the separating and holding means is a separating roller for holding the transfer sheet on a peripheral surface of a cylinder.

15

24. The recording apparatus according to claim 23, wherein the separating roller includes a rotating direction position detecting section for detecting a position in a rotating direction of the separating roller.

20

25. The recording apparatus according to claim 21 or 22, wherein the separating roller connects a driving source for controlling a rotating angle.

25

26. The recording apparatus according to claim 21 or 22, wherein the separating roller includes an axial direction position detecting section for detecting a position in an axial direction of the separating roller.

30

27. The recording apparatus according to claim 21, further comprising an axial direction slide mechanism for moving the separating roller in the axial direction of the separating roller.

35

28. The recording apparatus according to claim 27, wherein the axial direction slide mechanism has stop positions in two

places which are provided apart from each other at a predetermined interval in at least the axial direction.